



NSW
Therapeutic
Advisory
Group Inc.

Advancing
quality use
of medicines
in NSW

Group Discussion: Clozapine guidelines in NSW

Date: August 2018

Question:

To assist the Clozapine eHealth Chart Working Group, NSW TAG collated local guidelines or policies related to management of Clozapine Prescribing, Administration and Monitoring.

Responses:

10 responses were received from the following sites/LHDs:

Concord, Hunter New England LHD (HNELHD), Macquarie, Nepean Blue Mountains LHD (NBMLHD), Murrumbidgee LHD (MLHD), Northern NSW LHD (NNSWLHD), Northern Sydney LHD (NSLHD), South East Sydney LHD (SESLHD), Sydney LHD (SLHD), Southern NSW LHD (SNSWLHD)

A review of the documents with respect to monitoring and other recommended medication information was undertaken by NSW TAG and is summarized below. A table summarizing monitoring of troponin, CRP, ECG, echocardiogram, natriuretic peptide and CK-MB by LHDs/hospitals also follows. Variation between LHDs/hospitals exist. To allow for this, particularly if consensus cannot be reached, it may that all parameters should be available with districts/hospitals able to turn off those which are not required.

Medication information and monitoring recommendations identified from documents:

1. Pre-Treatment Workup / Baseline

1.1 Medical/Nursing Observations/other:

- Clinical evaluation
 - Full physical exam
 - Tried at least 2 other antipsychotics
 - BPRS
 - AIMS
 - Medical history
 - Family history cardiovascular, diabetes
 - Neurological
 - Other medical conditions
 - Medication history
- Smoking status
- Caffeine intake
- Substance use
- Vital signs BP, HR, temperature, respiratory rate
- Weight
- Waist circumference
- BMI
- Chest x-ray (SNSWLHD)
- Cerebral CT scan within last 2 years (SNSWLHD)

1.2 Haematological Monitoring

- full blood count (FBC), WBC, neutrophils, eosinophils
- E/U/Creatinine
- Blood group,

- BSL(fasting),
 - LFTs,
 - TFTS,
 - HDL cholesterol,
 - LDL cholesterol,
 - Serum triglycerides,
 - Troponin assay,
 - C-reactive protein
 - B-HCG (women)
 - Prolactin
- 1.3 Cardiac Monitoring
- In addition to troponin I or T, vital signs and symptoms reported by patient or on examination:
 - Echocardiogram
 - ECG

2. Dosing schedule/chart AND Monitoring Clozapine initial therapy (first 18 weeks)

- 2.1 Medical/Nursing Observations/other
- 2.1.1 ?include list of adverse effects similar to the national titration chart as a checklist post administration of a dose e.g. vital signs, hypersalivation etc
- 2.2 Mandatory haematological monitoring
- 2.3 Cardiac monitoring
- 2.4 Optional clozapine level if clinical need (smoking status change or ADR or ineffective/compliance concerns)

3. Dosing chart AND monitoring with established Clozapine therapy

- 3.1 Medical/Nursing Observations/other
- 3.2 Mandatory Haematological Monitoring
- 3.3 Cardiac Monitoring
- 3.4 Optional clozapine level if clinical need (smoking status change or ADR or ineffective/compliance concerns)

4. Dosing chart AND Monitoring in discontinued, interrupted/missed or re-titration of clozapine required

- 4.1 Medical/Nursing Observations/other
- 4.2 Mandatory Haematological Monitoring
- 4.3 Cardiac Monitoring
- 4.4 Optional clozapine level if clinical need (smoking status change or ADR or ineffective/compliance concerns)

Other items for consideration:

- Will there be a spot to tick or record relevant things have been done before the electronic 'adult clozapine titration chart' is used?
 - e.g. including that clozapine consent has been obtained
 - clozapine information brochure has been given to patient and/or carer

- Supply considerations:
 - o eMeds: what work flow is in place for autorefill of clozapine supply/dispensings?
 - E.g. NSLHD: An Outpatient Streamlined Authority Script is used for outpatient consumers having their clozapine dispensed from a hospital pharmacy. Consumers on Maintenance Therapy may have their clozapine dispensed by a retail pharmacy using an Authority Script. Repeat prescriptions or > 200 tablets, requires a phone Authority.
- eMeds: how will the chart align with discharges and transfers of clozapine 'admission, transfer or discharge' reconciliations
- Treatment interruption or discontinuation:
 - o If clozapine therapy has to be immediately ceased the advice in the Australian Consensus Statement should be followed. <http://www.triconsensus.com.au>
 - o Will there be an alert or something within the chart for doses not given >3 days? Or 3 days but less than 4 weeks or greater than 4 weeks - how will this be managed in the clozapine 'electronic chart'

Other patient data that some sites are recording:

- Clinical and physical assessments such as:
 - o Is patient constipated?
 - o Is patient on other medications that interact with clozapine that would warrant extra monitoring or clozapine levels
 - o Space to record examined or patient reported side effects/symptoms, which could warrant an ECG/FBC such as sore throat, symptoms of myocarditis in the first 4 weeks etc. .
 - o Clozapine plasma levels? Not mandatory but how will this tie in with the clozapine chart

Table summarizing monitoring of troponin, CRP, ECG, echocardiogram, natriuretic peptide and CK-MB is below:

Timepoint	Troponin I or T	CRP	ECG	Echocardiogram	NT-proBNP	CK-MB
Baseline	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 Concord Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD		
Week 1	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	NNSWLHD NSLHD SLHD SNSWLHD			
Week 2	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	NNSWLHD NSLHD SLHD SNSWLHD			
Week 3	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	NNSWLHD NSLHD(ECG if indicated) SNSWLHD			
Week 4	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 Concord HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	Concord NNSWLHD NSLHD(ECG if indicated) SESLHD SNSWLHD	SLHD (after 4-6 weeks)		
Week 5			NSLHD(ECG if indicated)	SLHD (after 4-6 weeks)		
Week 6	PD2012_005 HNELHD Macquarie MLHD NNSWLHD NSLHD	PD2012_005 HNELHD Macquarie MLHD NNSWLHD NSLHD	NSLHD(ECG if indicated)	SLHD (after 4-6 weeks)		

	SESLHD	SESLHD				
Week 12	Concord NBMLHD SLHD SNSWLHD	Concord NBMLHD SLHD SNSWLHD		Concord SLHD		
Week 18	PD2012_005 HNELHD Macquarie MLHD NNSWLHD NSLHD SESLHD	PD2012_005 HNELHD Macquarie MLHD NNSWLHD NSLHD SESLHD	NSLHD(ECG if indicated)			
Week 24 (6 months)	PD2012_005 HNELHD Macquarie MLHD NNSWLHD NSLHD SESLHD SNSWLHD	PD2012_005 HNELHD Macquarie MLHD NNSWLHD NSLHD SESLHD SNSWLHD	PD2012_005 HNELHD Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 HNELHD Macquarie MLHD NNSWLHD SESLHD SNSWLHD		
Week 52 (1yr)	PD2012_005 SNSWLHD	SNSWLHD	SNSWLHD	Concord SNSWLHD		
Week 72 (18 months)	SNSWLHD	SNSWLHD				
6-monthly ongoing	PD2012_005 HNELHD MLHD NSLHD SESLHD SLHD SNSWLHD	PD2012_005 HNELHD MLHD NSLHD SESLHD SLHD SNSWLHD		Macquarie NSLHD SLHD (if initial echo abnormal)		
Annually ongoing	Concord NBMLHD NNSWLHD	PD2012_005 Concord NBMLHD NNSWLHD	PD2012_005 HNELHD Concord Macquarie MLHD NBMLHD NNSWLHD NSLHD SESLHD SLHD	HNELHD NNSWLHD		
Other ongoing	SNSWLHD (repeat at yr, 2, 5 & 10 then every 5 yrs)	SNSWLHD (repeat at yr, 2, 5 & 10 then every 5 yrs)	NSLHD -Clinically thereafter SNSWLHD (repeat at yr, 2, 5 & 10 then every 5 yrs)	<ul style="list-style-type: none"> • PD2012_005 – as indicated • Concord (may be repeated at yr 2, 5 & 10) • MLHD (may be repeated at yr 2, 5 & 10) • NBMLHD – not specified • NNSWLHD (annually &/or may be repeated at yr 2, 5 & 10) • NSLHD(as indicated) • SESLHD(as indicated) • SNSWLHD (repeat at yr, 2, 5 & 10 then every 5 yrs) 	<ul style="list-style-type: none"> • PD2012_005 - if myocarditis suspected • HNELHD(if indicated) • MLHD(if indicated) • NNSWLHD(if indicated) 	<ul style="list-style-type: none"> • PD2012_005 - if myocarditis suspected • HNELHD(if indicated) • MLHD(if indicated) • NNSWLHD(if indicated)

Responses received as at 22/08/2018

Please note that all information and policies are only current at the time the response is sent and individual hospitals should be contacted to ascertain current policies and practices. The responses received are only representative of the hospitals participating in the discussion at the time and do not necessarily indicate a complete picture of current practices. Information sharing occurs on the understanding that due acknowledgement will be given to the original source and that the information will not be quoted or used out of the context of the discussion. Permission should be sought from the original source before any policy, protocol or guideline is used or applied in another setting.